

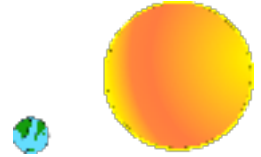
2.3 Astronomy TAG, Part 1

Where Is the Moon Located, and How Does It Move?

Name _____
Hour _____ Date _____

Read the top of p. 80.

What are you going to be investigating in this section?



Investigation 1: The Moon's Path In One Day

Read and complete the procedures on pp. 80-81.

Moon	Sun

Analyze Your Data

1. Compare the path the Moon appears to take across the sky to the path the Sun appears to take.
How are the paths similar? How are they different?
2. How would you describe to a friend where to find the Moon on this day if your friend first finds the Sun?
3. Where is the Moon when the Sun sets?
4. As seen from the continental United States, the Sun rises once each day and sets once each day.
What can you conclude about how often the Moon rises and sets?

Reflect

1. A classmate states that the Moon cannot be seen during the daytime. Do you agree or disagree?
Provide supporting evidence from your observations of the images.

2. A classmate concludes that the Moon's path across the sky is always lower than the Sun's path across the sky. What observations could you make to test whether this is true?

3. Think back to the last time you saw a full moon. How is the appearance of a full moon different from the appearance of the Moon in the image?

Investigation 2: The Moon's Position and Appearance Over Two Weeks

Read and complete the procedures on pp. 82-83.

The Moon's Appearance Over Two Weeks

Date & Time	How high is the Moon?	Direction to look for the Moon	Apparent shape of the Moon

Analyze Your Data

1. Describe the changes in the apparent shape of the Moon over two weeks.

2. When does the Moon appear to be closest to the Sun at sunset? When does the Moon appear to be the farthest from the Sun at sunset?

3. When does the Moon appear lowest in the sky at sunset? When does the Moon appear highest at sunset?

Reflect

1. How is the changing position of the Moon over two weeks similar to the changes you observed in the images you used, for the investigation (the Moon's motion during one day)? How is the changing position of the Moon over two weeks different from the changes that occur in one day?
2. In which direction is the Moon's position at sunset shifting, east to west or west to east? What do you think is the reason for the shift being in this direction?



Read "Moonlight" on p. 84.

How is the Moon like a mirror?

Reflect

1. On the right is a composite image of Earth and the Moon taken from space. Only part of Earth is illuminated. How could Earth shining with reflected sunlight account for Earth not looking like a sphere in the photograph?
2. Where do you think the Sun is located in this picture—to the left, to the right, above, or below Earth and the Moon? How do you know?

Read "Phases of the Moon" on pp. 85-86.

Stop and Think

1. How much of the Moon is illuminated at any particular time?
2. At the first quarter moon, how much of the illuminated part of the Moon can you see?
3. At the full moon, how much of the illuminated part of the Moon can you see?
4. Why do you think that you see more of the illuminated part of the Moon at full moon than at the first quarter moon?